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RE: 10/696,797

Attorney Docket: 43521-1100

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Patent

MAY 0 2 2006

43521-1100

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Patent Examiner: Berhanu, Etsub D.

Hidel Eda et al.

Group Art Unit: 3768

Serial No.: 10/696,797

May 2, 2006

Filed: October 30, 2003

1444 2, 2000

For: DEVICE TO MEASURE DEGREE OF

ACQUISITION AND METHOD FOR

Costa Mesa, California 92626

MEASURING DEGREE OF

ACQUISITION

LETTER

<u>VIA FACSIMILE</u> 571-273-8300

ATTN: EXAMINER BERHANU

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Examiner Berhanu:

Applicant filed the attached Preliminary Amendment with the original application. This Preliminary Amendment, however, has not been addressed, including the additional Claims 28-30, in the Office Action of April 25, 2006. It should be noted that applicant appropriately paid the fees for 30 claims.

It is respectfully requested that a responsive action be provided on the Preliminary

Amendment with a new response date set.

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> Patent 43521-1100

If there are any questions with regards to this matter, the undersigned attorney would appreciate a telephone conference.

I hereby certify that this correspondence is being Very truly yours, transmitted via facsimile to the USPTO at 571-273-8300 on May 2, 2006.

SNELL & WILMER L.L.P.

Sharon Farnus By:

Signature

Dated: May 2, 2006

Joseph W. Price

Registration No. 25,124

600 Anton Boulevard, Suite 1400 Costa Mesa, California 92626-7689

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Patent 43521-1100

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Patent Examiner:

Group Art Unit:

COPY

Hideo Eda, et al.

Serial No.:

Filed: Herewith

For: DEVICE TO MEASURE DEGREE OF ACQUISITION AND METHOD

FOR MEASURING DEGREE OF

ACQUISITION

October 30, 2003

Irvine, California 92614

PRELIMINARY AMENDMENT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sirs:

Prior to an examination on the merits of the above-identified application, please enter the following.

IN THE CLAIMS:

- 1. (Amended) A device to measure a degree of acquisition comprising;
- a measuring portion that measures a blood amount or/and a blood component amount in a predetermined measuring region of a brain [brains] of a subject,
- a dischronic change data producing portion that obtains the blood amount or/and the blood component amount measured in the above-mentioned measuring portion chronologically and produces dischronic change data as data showing dischronic change of the blood amount or/and the blood component amount, and
- a waveform output portion that outputs a waveform of the diachronic change data in each work in a comparable manner in case the subject repeatedly conducts the predetermined work several times.
- 2. (Original) The device to measure a degree of acquisition described in claim 1, and characterized by that the measuring portion measures at least an amount of deoxyhemoglobin in blood and the waveform output portion outputs the waveform of the diachronic change data in accordance with the amount of deoxyhemoglobin.
- 3. (Original) The device to measure a degree of acquisition described in claim 1, and characterized by that further comprising an acquisition degree calculating portion that calculates a degree of acquisition to each work for the subject.
- 4. (Original) The device to measure a degree of acquisition described in claim 3, and characterized by that the acquisition degree calculating portion determines that the degree of acquisition to the work for the subject is high in case the amount of deoxyhemoglobin tends to remain generally unchanged or to decrease in the diachronic change data during the work in spite of the lapse of time.

- 5. (Original) The device to measure a degree of acquisition described in claim 1, and characterized by that the predetermined measuring region is an area corresponding to a higher brain function portion.
- (Original) The device to measure a degree of acquisition described in claim 1,
 characterized by that the predetermined measuring region is set at the frontal lobe.
- 7. (Original) The device to measure a degree of acquisition described in claim 1, and characterized by that the measuring portion measures the blood amount or/and the blood component amount by making use of a near-infrared spectroscopy.
- 8. (Original) The device to measure a degree of acquisition described in claim 7, wherein the measuring portion is a type of one channel.
- 9. (Original) The device to measure a degree of acquisition described in claim 1, in case a posture when the subject conducts a work is different from a posture when the subject does not conduct the work, wherein the blood amount or/and the blood component amount is measured in a state the subject does not conduct the work with taking a posture of conducting the work and a diachronic change of a value that is calculated by subtracting a blood amount or/and a blood component amount when the subject conducts the work from the blood amount or/and the blood component amount measured in the above state is assumed to be the dischronic change data.
 - 10. (Amended) A device to measure a degree of acquisition comprising:
- a measuring portion that measures one of a blood amount [or/] and a blood component amount in a predetermined measuring portion of a brain [brains] of a subject,
- a dischronic change data producing portion that obtains one of the blood amount [or/] and the blood component amount measured in the above-mentioned measuring portion

chronologically and produces diachronic change data as data showing diachronic change of the blood amount or/and the blood component amount, and

a waveform output portion that outputs a waveform of the dischronic change data in each work in a comparable manner in case the subject conducts a work and other work different from the former work.

- 11. (Original) The device to measure a degree of acquisition described in claim 10, and characterized by that the measuring portion measures at least an amount of deoxyhemoglobin in blood and the waveform output portion outputs the waveform of the dischronic change data in accordance with the amount of deoxyhemoglobin.
- 12. (Original) The device to measure a degree of acquisition described in claim 10, and characterized by that further comprising an acquisition degree calculating portion that calculates a degree of acquisition to each work for the subject.
- 13. (Original) The device to measure a degree of acquisition described in claim 12, and characterized by that the acquisition degree calculating portion determines that the degree of acquisition to the work for the subject is high in case the amount of deoxyhemoglobin tends to remain generally unchanged or to decrease in the diachronic change data during the work in spite of the lapse of time.
- 14. (Original) The device to measure a degree of acquisition described in claim 10, and characterized by that the predetermined measuring region is an area corresponding to a higher brain function portion.
- 15. (Original) The device to measure a degree of acquisition described in claim 10, characterized by that the predetermined measuring region is set at the frontal lobe.

- 16. (Original) The device to measure a degree of acquisition described in claim 10, and characterized by that the measuring portion measures the blood amount or/and the blood component amount by making use of a near-infrared spectroscopy.
- 17. (Original) The device to measure a degree of acquisition described in claim 16, wherein the measuring portion is a type of one channel.
- 18. (Original) The device to measure a degree of acquisition described in claim 10, in case a posture when the subject conducts a work is different from a posture when the subject does not conduct the work, wherein the blood amount or/and the blood component amount is measured in a state the subject does not conduct the work with taking a posture of conducting the work and a diachronic change of a value that is calculated by subtracting a blood amount or/and a blood component amount when the subject conducts the work from the blood amount or/and the blood component amount measured in the above state is assumed to be the diachronic change data.
 - 19. (Amended) A device to measure a degree of acquisition comprising:
- a measuring portion that measures an amount of deoxyhemoglobin in a predetermined measuring region of a brain [brains] of a subject,
- a dischronic change data producing portion that obtains the amount of deoxyhemoglobin measured in the above-mentioned measuring portion chronologically and produces dischronic change data as data showing dischronic change of the amount of deoxyhemoglobin, and
- a waveform output portion that outputs a waveform of diachronic change data in case the subject conducts a predetermined work.

- 20. (Original) The device to measure a degree of acquisition described in claim 19, and characterized by that further comprising an acquisition degree calculating portion that calculates a degree of acquisition to each work for the subject.
- 21. (Original) The device to measure a degree of acquisition described in claim 20, and characterized by that the acquisition degree calculating portion determines that the degree of acquisition to the work for the subject is high in case the amount of deoxyhemoglobin tends to remain generally unchanged or to decrease in the dischronic change data during the work in spite of the lapse of time.
- 22. (Original) The device to measure a degree of acquisition described in claim 19, and characterized by that the predetermined measuring region is an area corresponding to a higher brain function portion.
- 23. (Original) The device to measure a degree of acquisition described in claim 19, characterized by that the predetermined measuring region is set at the frontal lobe.
- 24. (Original) The device to measure a degree of acquisition described in claim 19, and characterized by that the measuring portion measures the blood amount or/and the blood component amount by making use of a near-infrared spectroscopy.
- 25. (Original) The device to measure a degree of acquisition described in claim 24, wherein the measuring portion is a type of one channel.
- 26. (Original) The device to measure a degree of acquisition described in claim 19, in case a posture when the subject conducts a work is different from a posture when the subject does not conduct the work, wherein the blood amount or/and the blood component amount is measured in a state the subject does not conduct the work with taking a posture of conducting the work and a diachronic change of a value that is calculated by subtracting a blood amount or/and

a blood component amount when the subject conducts the work from the blood amount or/and the blood component amount measured in the above state is assumed to be the diachronic change data.

27. (Amended) A method for measuring a degree of acquisition wherein a blood amount or/and a blood component amount in a predetermined measuring region of brains of a subject is measured chronologically with the use of a near-infrared spectroscopy, comprising:

measuring dischronic change data as data showing dischronic change of the blood amount and/or the blood component amount in the subject [is produced] and

determining a degree of acquisition of [to a] work knowledge by [for] a subject [is determined] based on the diachronic change data.

28. (New) A method of measuring the acquisition of information by a user comprising,

connecting a portion of a head of a user to an instrument that records a change in a measurable characteristic of blood in the head of the user;

subjecting the user to pre-determined stimuli representative of information to be acquired by the user;

acquiring changes in the measurable characteristic of blood of the user while subject to the pre-determined stimuli;

comparing the acquired changes to an observed response of the user which is representative of acquisition of the information to provide a reference level;

monitoring the measurable characteristic of blood while subjecting the user to a second stimuli representative of information to be taught to the user; and

comparing the change in the measurable characteristic to the reference level to determine the degree of acquisition by the user of the second stimuli.

- 29. (New) The method of claim 28 wherein an amount of deoxyhemoglobin is measured in the blood.
- 30. (New) The method of claim 29 wherein the portion of the head is adjacent the frontal lobe of a brain of the user.

REMARKS

The newly proposed claims are within the scope of the present invention and do not add any new matter.

If the Examiner believes a telephone interview would help in the further prosecution in this case, he is respectfully requested to contact the undersigned attorney at the listed telephone number.

Very truly yours,

SNELL & WILMER L.L.P.

leseph W. Price

Registration No. 25,124

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Irvine, California 92614-7230

Telephone: (949) 253-4920

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POTUL ROUTEVOO

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| UTILITY PATENT APPLICATION TRANSMITTAL 4352 | | | | | <u> </u> | et No. I-1100 this Submission |
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| | | Fee Calculati | | smittal | | |
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| For | #Filed | #Allowed # | Extra | Rate | | \$180.00 |
| Total Claims | 30 | - 20 = | 10 | × \$18.00 | | |
| indep. Claims | 5 | - 3 = | 2 | × \$88.00 | | \$172.00 |
| Multiple Dependent Claims (check if applicable) | | | | | | \$0.00 |
| | | | | • | BASIC FEE | \$770.00 |
| OTHER FEE (specify purpose) Assignment | | | | | | \$40.00 |
| | | | • | TOT | al filing fee | \$1,162.00 |
| Charge the | eby authorized to a amount of overpayment. y additional filing a issue fee set in o 37 C.F.R. 1.31 | st,162.80 as fees required u 37 C.F.R. 1.18 | dit Deposit A filing fee. Inder 37 C.F. at the mailing SN 192 Irv | R, 1.16 and 1.17 | Signature Eg. No. 25,124 R L.L.P. Suite 1200 2614-7230 | |
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